SUMup Snow Depth on Sea Ice Dataset readme

1.0 Introduction

This snow depth on sea ice dataset was compiled by the Surface mass balance and snow on sea ice working group (SUMup). This dataset includes snow depth on sea ice measurements from both hemispheres. This dataset is a community effort to distribute easy to use in-situ data to improve surface mass balance modeling and remote sensing efforts. This dataset is a compilation of work from many individual researchers. When using this dataset please cite **both** the individual researchers who provided the data as listed in the Citation Key below as well as the dataset. For questions about the dataset or to contribute your data to the dataset please contact the lead dataset compiler Lora Koenig lora.s.koenig@nasa.gov.

2.0 Contributing to the dataset

If you would like to contribute to the dataset please enter your data into the SUMup_data_templates.xlsx file under the Snow Depth tab.

For no data enter -9999 otherwise fill in the columns as follows:

Date Taken- enter the year and day the data was taken in format YYYYMMDD.

Lat-Latitude of measurements in decimal degrees (N is positive S is negative).

Long- Longitude of measurement in decimal degrees (E is positive W is negative).

Snow Depth- snow depth on sea ice in m.

Error- 1 sigma error on snow depth measurement.

Density Taken-enter 0 for no if there is no corresponding snow density measurements. Enter 1 for yes if there is a simultaneous snow density measurement for this snow on sea ice measurement contained in the SUMup Snow Density dataset.

Sea Ice Thickness- sea ice thickness in m.

Error- 1 sigma error on sea ice thickness measurement.

Sea Ice Type- enter 1 for first year sea ice and 2 for multiyear ice and -9999 if not known.

Sea Ice Freeboard- sea ice freeboard in m.

Error-1sigma error on sea ice freeboard measurement.

Radar Horizontal Resolution- the horizontal resolution in m of continuous radar data.

Method- see method key for snow depth on sea ice measurements below for numeric value of method used. If a method was used not listed in the key please add the method to the key with the next highest number.

Citation- see citation key for snow depth on sea ice measurements below for numeric value of citation. If it is a new citation please add the citation to the key and assign the next highest number.

If you cannot enter your data into the SUMup template and would still like to contribute it please e-mail the data in its current form to lora.s.koenig@nasa.gov and the data will be reformatted and added as resources allow.

3.0 Format

The dataset is in tab delaminated text files and excel spread sheets. With the following columns, described in more detail in section 2.0. Date Taken, Lat, Long, Snow Depth in m, Error, Density Taken, Sea ice Thickness in m, Error, Sea ice Type, Sea Ice Freeboard in m, Error, Radar Horizontal Resolution in m, Method, and Citation.

No data value is -9999.

4.0 Method Key

1. Ruler
2. Magnaprobe

5.0 Citations

When using this dataset please cite **both** the individual researchers who provided the data as listed in the Citation Key below as well as the dataset.

Surface mass balance and snow on sea ice working group (SUMup) (date accessed). SUMup Snow Depth on Sea Ice Dataset. Greenbelt, MD, USA: NASA Goddard Space Flight Center. Digital media.

5.1 Citations Key

1.

6.0 Acknowledgement

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